

TRINEXAPAC-ETHYL, PLANT POPULATION, NITROGEN FERTILITY,  
AND CROP PRODUCTION IN DRILL-SEEDED RICE

R.T. Dunand

LSU AgCenter, Louisiana Agricultural Experiment Station, Rice Research  
Station, 1373 Caffey Road, Rayne, LA 70578

Under intense management (higher than recommended seeding and nitrogen fertility rates), lodging resistant/tolerant rice varieties will lodge. Trinexapac-ethyl can decrease plant stature and reduce lodging in rice. Francis, a variety moderately susceptible to lodging, was grown with dense stands and high nitrogen fertility. Foliar treatments of trinexapac-ethyl (6 and 12 g/A) were applied during the initial stages of stem formation (internode elongation). Growth reduction was noted within 2 weeks after application. At maturity, trinexapac-ethyl reduced mature plant height between 5 and 10%, delayed heading (a measure of crop maturity) between 1 and 3 days and increased grain yield up to 5% in the first crop. Rice was most responsive to trinexapac-ethyl at either a high plant population or with supplemental nitrogen fertility. With combinations of high plant population and supplemental nitrogen, the response to trinexapac-ethyl was minimal. Lodging was absent in the first crop. The second or ratoon crop, which originated from the stubble of the first crop, was unaffected by trinexapac-ethyl.